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(71) Applicant: **CANON INC**

(72) Inventor: **ARAI TAKASHI**

(54) **DEVICE FOR FORMING FUNCTIONAL DEPOSITED FILM BY MICROWAVE PLASMA CVD METHOD**

(57) Abstract:

PURPOSE: To steadily form a functional deposited film with high efficiency by providing a means for efficiently introducing a raw gas into a plasma producing region and a means for adjusting the exhaust in the region to a raw gas supply means.

CONSTITUTION: A raw gas supply pipe 10 has the shape of a triangular pole, a comb- line raw gas injection nozzle 10' is provided to one corner of the side wall, and the tip of the nozzle is directed to the inside of the plasma producing region 9. The inside of a vacuum vessel 1 is evacuated through an exhaust pipe 5, a cylindrical base body 7 is heated by a built-in heater, and the raw gas is injected into the vessel 1 through the nozzle 10' of the supply pipe 10. A microwave 4 is introduced into the vessel 1 through a waveguide 3, etc., and a deposited film is formed on the surface of the base body 7. The raw gas injected from the tip of the nozzle 10' is diffused into the region 9 in the direction as shown by the arrow, and the diffusion amt. to the outside of the region 9 is drastically reduced. When the gas in the region 9 is discharged through the exhaust pipe 5, the exhaust gas passes through the space between the base body 7 and the supply pipe 10 while lapping the body and pipe, hence the exhaust conductance is made constant, and the concn. of the active species is fixed.

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